AMENDMENTS TO THE CLAIMS

Please cancel claim 2, amend claims 1, 3, 5 - 8, 10, 11, 12, 14, and 15, and add new claim 16, as follows:

1. (currently amended) A circuit for glitch-free changing of clocks having different phases, wherein the circuit receives M clocks labeled by 1~M and at least one data stream, in which the M clocks have the same frequency and are different in phase sequentially, and one of the M clocks (labeled by N, $1 \leq N \leq M$) is selected to be a system clock, the circuit comprising:

a phase detector for detecting ~~receiving~~ the phases of the data stream and the system clock, and generating a phase-up signal and a phase-down signal accordingly;

a flag signal generator coupled to the phase detector for receiving the phase-up signal and the phase-down signal, and then generating M flag signals, wherein only one of the M flag ~~signal~~ signals is ~~substantially~~ enabled at the same time;

a select signal generator coupled to the flag signal generator, for receiving the M flag signals and the M clocks to correspondingly generate M select signals;

means for enabling the select signal corresponding to the enabled flag signal; and

an output stage coupled to the select signal generator, for receiving the M select signals and the M clocks, and then outputting the system clock, wherein the outputted system clock corresponds to one of the M clocks selected by the enabled select signal;

wherein when the phase of the data stream lags behind the phase of the system clock, the phase-up signal is enabled, then a flag signal N+1 corresponding to a clock N+1 is enabled, a select signal N+1 corresponding to the flag signal N+1 is enabled, and the clock N+1 is set as the system clock; and

wherein when the phase of the data stream leads the phase of the system clock, the phase-down signal is enabled, then a flag signal N-1 corresponding to a clock N-1 is enabled, a select signal N-1 corresponding to the flag signal N-1 is enabled, and the clock N-1 is set as the system clock.

Claim 2 (canceled)

3. (currently amended) ~~The circuit of claim 1,~~ A circuit for glitch-free changing of clocks having different phases, wherein the circuit receives M clocks labeled by 1~M and at least one data stream, in which the M clocks have the same frequency and are different in phase sequentially, and one of the M clocks (labeled by N, $1 \leq N \leq M$) is selected to be a system clock, the circuit comprising:

a phase detector for receiving the data stream and the system clock, and generating a phase-up signal and a phase-down signal;

a flag signal generator coupled to the phase detector for receiving the phase-up signal and the phase-down signal, and then generating M flag signals, wherein only one of the M flag signal is enabled at the same time;

a select signal generator coupled to the flag signal generator, for receiving the M flag signals and the M clocks to correspondingly generate M select signals;

enabling the select signal corresponding to the enabled flag signal; and

an output stage coupled to the select signal generator, for receiving the M select signals and the M clocks, and then outputting the system clock, wherein the outputted system clock corresponds to one of the M clocks selected by the enabled select signal;

wherein under the condition of clock N being at a first level, when the phase-up signal is enabled, the flag signal N+1 is enabled; and when the phase-down signal is enabled, the flag signal N-1 is enabled.

4. (original) The circuit of claim 3, wherein the first level is a low level.

5. (currently amended) The circuit of claim ~~1~~3, wherein a high level is defined as being enabled.

6. (currently amended) The circuit of claim ~~1~~3, wherein the flag signal generator is a ring counter.

7. (currently amended) The circuit of claim ~~1~~3, wherein the select signal generator comprises M low pass latches, and each of the M low pass latches comprises a clock input, a signal input, and an output.

8. (currently amended) The circuit of claim 7, wherein, for the Nth latch, its clock input correspondingly receives the clock N, the signal input correspondingly receives the flag signal N and the output correspondingly outputs the select signal N, and when the clock N is at a first level, the select signal N ~~substantially~~ outputs the same level with the flag signal.

9. (original) The circuit of claim 8, wherein the first level is a low level.

10. (currently amended) The circuit of claim ~~1~~3, wherein the select signal generator comprises M D-type flip-flops, and each of the D-type flip-flops comprises a clock input, a signal input, and an output.

11. (currently amended) The circuit of claim 10, wherein each of the D-type ~~flip-flop~~ flip-flops is triggered at a rising edge.

12. (currently amended) The circuit of claim 10, wherein, for each D-type flip-flop, its clock input correspondingly receives the clock N, the signal input correspondingly receives the flag signal N and the output correspondingly outputs the select signal N, and when the clock N is at a first level, the select signal N ~~substantially~~ outputs the same level with the flag signal.

13. (original) The circuit of claim 12, wherein the first level is a low level.

14. (currently amended) The circuit of claim ~~1~~3, wherein the output stage further comprises:

M OR-gates, each of the OR-gate receiving each of the M select signals and each of the corresponding M clocks; and

an AND-gate, for receiving outputs of the M OR-gates and outputting the system clock.

15. (currently amended) A method for changing ~~clock~~ clocks having different phase without glitch, used for receiving M ~~clock~~ clocks and at least one data stream and then outputting a system clock, wherein the M clocks have the same frequency but are different in phase sequentially, and one of the M clocks (labeled by clock N, $1 \leq N \leq M$) is currently the system clock, the method comprising the steps of:

a. determining the phase of the data stream, and proceeding to a next step b if the phase of the data stream is changed, otherwise repeating step a;

b. enabling a flag signal N+1 corresponding to the clock N+1 and then proceeding to a step c when the phase of the data stream lags behinds the phase of the system clock;

c. enabling a flag signal N-1 corresponding to the clock N-1 and then proceeding to a step d when the phase of the data stream leads the phase of the system clock and the system clock is at a first level;

d. enabling a select signal N+1 corresponding to the flag signal N+1 and then proceeding to a step f, when the clock N is at the first level;

e. enabling a select signal N-1 in response to the flag signal N-1 and then proceeding to a step g, when the clock N is at the first level;

f. setting the clock N+1 as the system clock and increasing N by one, and then returning to the step a; and

g. setting the clock N-1 as the system clock and decreasing N by one, and then returning to the step a.

16. (original) The method of claim 15, wherein a high level is defined as being enabled.

17. (original) The method of claim 15, wherein the first level is a low level.

18. (new) The circuit of claim 3, wherein when the phase of the data stream lags behind the phase of the system clock, the phase-up signal is enabled, and when the phase of the data stream leads the phase of the system clock, the phase-down signal is enabled.